

Title (en)

Ferritic niobium-stabilised 14% chromium steel and its use in the car industry

Title (de)

Ferritisches Niobium-stabilisiertes 14% Chrom-stahl und dessen Verwendung in Kraftfahrzeugen

Title (fr)

Acier ferritique à 14% de chrome stabilisé au niobium et son utilisation dans le domaine de l'automobile

Publication

**EP 1083241 B1 20041110 (FR)**

Application

**EP 00402447 A 20000906**

Priority

FR 9911257 A 19990909

Abstract (en)

[origin: EP1083241A1] Niobium stabilized ferritic chromium steel strip is produced from a steel having specified molybdenum, silicon and tin contents and containing a cubic iron-niobium phase as the sole intermetallic phase at high temperature. A niobium stabilized ferritic 14% chromium steel strip is produced from a steel of composition (by wt.)  $\leq 0.02\%$  C,  $0.002-0.02\%$  N,  $0.05-1\%$  Si, greater than 0 to  $1\%$  Mn,  $0.2-0.6\%$  Nb,  $13.5-16.5\%$  Cr,  $0.02-1.5\%$  Mo, greater than 0 to  $1.5\%$  Cu, greater than 0 to  $0.2\%$  Ni, greater than 0 to  $0.020\%$  P, greater than 0 to  $0.003\%$  S, greater than  $0.005$  to  $0.04\%$  Sn, balance Fe and impurities, the Nb, C and N contents satisfying the relationship  $Nb/(C + N) \geq 9.5$ , by: (a) reheating before hot rolling at  $1150-1250$  (preferably  $1175$ ) degrees C; (b) coiling at  $600-800$  (preferably  $600$ ) degrees C; (c) cold rolling, optionally after pre-annealing; and (d) final annealing at  $800-1100$  (preferably  $1050$ ) degrees C for  $1-5$  (preferably  $2$ ) min. An Independent claim is also included for a niobium stabilized 14% chromium ferritic steel sheet obtained by the above process.

IPC 1-7

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IPC 8 full level

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Cited by

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